

## ABSTRACT OF THE INVENTION

Fuel cells (e.g., air-depolarized fuel cells) are stacked, supported and electrically interconnected into a battery structure with a connector block. The anode and cathode elements of each fuel cell are provided with conductive terminating elements (e.g., plug connectors), preferably extending in downward "U" shaped configuration from the upper ends of the anode and cathode elements respectively. The connector block comprises a series of conductive apertures, positioned and sized, to accommodate the conductive terminating elements of the anodes and cathodes therein. When the conductive terminating elements of the anodes and cathodes are slidably engaged with the conductive apertures of the connector block, the connector block mechanically supports the anodes and cathodes so engaged. The connector block preferably comprises electrically conductive elements to electrically connect the anodes and cathodes of the stacked cells in a desired electrical interconnection (serial, parallel and mixed serial and parallel segments). The interconnection between terminal conductor elements and the respective apertures further serves to support and orient the cells in a minimal volume and permits selective rapid cell removal for replacement or servicing. The cells are also provided with keyed members for keyed interlocking with a support tray having co-fitting keying elements to provide full structural integrity for the stacked cells. Lateral end elements extend between the connector block and support tray to complete an open enclosure and provide a support base for air circulating devices such as fans. Air is circulated through a duct defined by the connector block.

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